



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2018-0409; Product Identifier 2017-NM-120-AD;

Amendment 39-19559; AD 2019-03-07]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2017-16-05, which applied to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. AD 2017-16-05 required a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose attachment hardware, and related investigative and corrective actions if necessary. This AD adds airplanes and an additional inspection to determine if any Krueger flap no. 1, 2, 3, or 4 has been replaced, and related investigative and corrective actions. Since this is a rotatable parts issue, the applicability of this AD has been expanded beyond the airplanes listed in the related service bulletin to include all airplanes on which a Krueger flap bullnose may be installed. This AD was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser, and a report of a missing no. 2 Krueger flap bullnose hinge bolt from an airplane that was not included in the effectivity of AD 2017-16-05. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0409.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0409; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations (phone: 800-647-5527) is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Alan Pohl, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3527; email: alan.pohl@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-16-05, Amendment 39-18982 (82 FR39344, August 18, 2017) (“AD 2017-16-05”). AD 2017-16-05 applied to certain The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the Federal Register on May 15, 2018 (83 FR22420). The NPRM was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser, and a report of a missing no. 2 Krueger flap bullnose hinge bolt from an airplane that was not included in the effectivity of AD 2017-16-05. The NPRM proposed to continue to require a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose attachment hardware, and related investigative and corrective actions, if necessary. The NPRM also proposed to add airplanes and an additional inspection to determine if any Krueger flap no. 1, 2, 3, or 4 has been replaced, and related investigative and corrective actions. Since this is a rotatable parts issue, the applicability of this AD has been expanded beyond the airplanes listed in the related service bulletin to include all airplanes on which a Krueger flap bullnose may be installed. We are issuing this AD to address missing Krueger flap bullnose hardware. Such missing hardware could result in the Krueger flap bullnose departing the airplane during flight, which could damage empennage structure and lead to the inability to maintain continued safe flight and landing.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA’s response to each comment.

Support for the NPRM

Boeing concurred with the content of the NPRM. Delta Air Lines (DAL) and American Airlines (AAL) concurred with the intent of the NPRM.

Effect of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing stated that accomplishing the Supplemental Type Certificate (STC) ST00830SE does not affect the actions specified in the NPRM.

We concur with the commenter. We have redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD and added paragraph (c)(2) to this AD to state that installation of STC ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

Request to Remove Airplanes from the Applicability

All Nippon Airways (ANA) requested that we remove the airplanes identified in paragraph (c)(3) of the proposed AD. ANA stated that those airplanes are not required to do the actions specified in paragraph (g) of the proposed AD.

We disagree with the request. Although the airplanes identified in paragraph (c)(1)(iii) of this AD (paragraph (c)(3) of the proposed AD) are not required to do the actions specified in paragraph (g) of this AD, those airplanes must still comply with the parts installation limitation specified in paragraph (i) of this AD. We have not changed this AD in this regard.

Request for a Different Method of Compliance

DAL requested that we include an option in paragraph (i) of the proposed AD to install the Krueger flap before accomplishing the required actions. DAL mentioned that it has updated its manuals to inspect after installation on the airplane, not prior to installation.

We agree that clarification is necessary. The required inspection of the Krueger flap bullnose can only be accomplished after installation on the Krueger flap assembly, either prior to or after installation on the airplane. We have revised paragraph (i) to specify that the actions required by paragraph (g) of this AD must be accomplished after installation but prior to further flight.

Request to Clarify which Krueger Flaps are Affected

DAL and AAL requested that we clarify paragraph (i) of the proposed AD to specify affected Krueger flap(s) and Krueger flap bullnose(s). DAL stated that not all four positions need to be inspected, only the Krueger flap(s) and Krueger flap bullnose(s) being installed. AAL suggested that we reword paragraph (i) of the proposed AD to improve clarity.

We agree with the request because it is not necessary to perform the actions specified in paragraph (i) of this AD on all four Krueger flap(s) or Krueger flap bullnose(s). Only the Krueger flap(s) or Krueger flap bullnose(s) being installed must be inspected. We have revised paragraph (i) of this AD to specify: “These actions are required only for the Krueger flap(s) or Krueger flap bullnose(s) being installed.”

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously, and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR part 51

We reviewed Boeing Alert Service Bulletin 737-57A1327, Revision 2, dated July 25, 2017. This service information describes procedures for a one-time detailed visual inspection for discrepancies in the Krueger flap bullnose attachment hardware, and related investigative and corrective actions; and an inspection to determine if any Krueger flap no. 1, 2, 3, or 4 has been replaced, and related investigative and corrective actions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 1,814 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection of the Krueger flap bullnose hardware (1,495 airplanes) (retained actions from AD 2017-16-05)	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$381,225

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection to determine if any Krueger flap no. 1, 2, 3, or 4 has been replaced (1,814 airplanes) (new action)	3 work-hours X \$85 per hour = \$255	\$0	\$255	\$462,570

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all available costs in our cost estimate.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2017-16-05, Amendment 39-18982 (82 FR 39344, August 18, 2017), and adding the following new AD:

2019-03-07 The Boeing Company: Amendment 39-19559; Docket No. FAA-2018-0409; Product Identifier 2017-NM-120-AD.

(a) Effective Date

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2017-16-05, Amendment 39-18982 (82 FR 39344, August 18, 2017) (“AD 2017-16-05”).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category, as specified in paragraphs (c)(1)(i) through (c)(1)(iii) of this AD.

(i) Airplanes in Groups 1 and 2 as identified in Boeing Alert Service Bulletin 737-57A1327, Revision 2, dated July 25, 2017 (“BASB 737-57A1327, R2”).

(ii) Airplanes in Group 3, as identified in BASB 737-57A1327, R2, except where this service bulletin specifies the groups as line numbers 6422 through 6465 inclusive, this AD specifies those groups as line number 6422 through any line number airplane with an original Certificate of Airworthiness or an original Export Certificate of Airworthiness dated on or before the effective date of this AD.

(iii) All Model 737-600, -700, -700C, -800, -900 and -900ER series airplanes with an original Certificate of Airworthiness or an original Export Certificate of Airworthiness dated after the effective date of this AD.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a report of a Krueger flap bullnose departing an airplane during taxi, which caused damage to the wing structure and thrust reverser, and a report of a missing no. 2 Krueger flap bullnose hinge bolt from an airplane that was not included in the effectivity of AD 2017-16-05. We are issuing this AD to address missing Krueger flap bullnose hardware. Such missing hardware could result in the Krueger flap bullnose departing the airplane during flight, which could damage empennage structure and lead to the inability to maintain continued safe flight and landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

For airplanes identified in paragraphs (c)(1)(i) and (c)(1)(ii) of this AD: Except as required by paragraph (h) of this AD, at the applicable times specified in paragraph 1.E., “Compliance,” of BASB 737-57A1327, R2, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of BASB 737-57A1327, R2.

(h) Exceptions to Service Information Specifications

(1) For purposes of determining compliance with the requirements of this AD: Where BASB 737-57A1327, R2 uses the phrase “the original issue date of this service

bulletin,” this AD requires using September 22, 2017 (the effective date of AD 2017-16-05).

(2) For purposes of determining compliance with the requirements of this AD: Where BASB 737-57A1327, R2 uses the phrase “the Revision 2 date of this service bulletin,” this AD requires using “the effective date of this AD.”

(i) Parts Installation Limitation

As of the effective date of this AD, no person may install a Krueger flap or Krueger flap bullnose on any airplane identified in paragraph (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this AD, unless the actions required by paragraph (g) of this AD have been accomplished on the Krueger flap bullnose after installation but prior to further flight. These actions are required only for the Krueger flap(s) or Krueger flap bullnose(s) being installed.

(j) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before September 22, 2017 (the effective date of AD 2017-16-05), using Boeing Alert Service Bulletin 737-57A1327, dated May 20, 2016.

(2) This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD, using Boeing Alert Service Bulletin 737-57A1327, Revision 1, dated September 28, 2016.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in

paragraph (l)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2017-16-05 are approved as AMOCs for the corresponding provisions of BASB 737-57A1327, R2 that are required by paragraph (g) of this AD.

(5) For service information that contains steps that are labeled as RC, the provisions of paragraphs (k)(5)(i) and (k)(5)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Operators may deviate from steps not labeled as RC by using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(l) Related Information

(1) For more information about this AD, contact Alan Pohl, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3527; email: alan.pohl@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (m)(4) of this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 737-57A1327, Revision 2, dated July 25, 2017.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on February 7, 2019.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.
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